

## ON AMICULA AND CRYPTOCHITON

BY WILLIAM H. DALL

In the NAUTILUS (No. 2, p. 47) Tom Iredale has a communication on the status of *Amicula*. His conclusions, on a careful review of the literature, seem open to doubt, as will presently appear. Gray's original remark in relation to this genus in the Synopsis of the British Museum (Ed. 42 A, p. 127, 1840) is as follows:

“*Acanthochites* is peculiar for having a bundle of bristles placed on each side of the valves; and *Chitonellus* and *Amicula* differ only in having the valves nearly hidden in the mantle of the animals.”

I agree with Iredale in considering this remark as insufficient to establish a genus, but it shows clearly that Gray's idea was that of a chiton-like *vestitus* or *amiculatus* of Pallas, and not one in which the valves are *entirely* covered by the mantle as in *C. stelleri*.

Now in the second edition of Sowerby's Conchological Manual, 1842, we find:

“*Amicula*. A genus formed for the reception of *Chiton amiculatus* Auct. the valves of which are covered by an integument, so as to be completely hidden externally. Page 311, fig. 507. *Chiton amiculatus*. *Amicula* Gray.”

Then follows (p. 128):

“*Cryptoconchus* Blainville. A genus composed of species of *Chiton* the valves of which are covered by the integument, as *Chiton porosus* of Burrows. *Ch. amiculatus* of Pallas. Page 311, fig. 507. *Chiton amiculatus*. *Amicula* Gray.”

Now neither in *C. amiculatus* Pallas, nor in *C. porosus* Burrows, are the valves completely hidden by the integument, in spite of Sowerby's statement. Furthermore, figure 507, which Iredale assumes to represent *C. stelleri*, is a crude drawing of a dry shell which is represented with nine valves and, except for the fact that the draughtsman has overlooked the minute, exposed apices of the valves, at once recalls *C. vestitus*. In the preface to the fourth edition of the work the author states that “many synonyms have been rectified, some dates have been

given, a few doubtful or unnecessary definitions have been altered or expunged," etc.

On page 62, we find:

"*Amicula* Gray, 1842. A genus formed for the reception of *Chiton vestitus*, the valves of which are covered by an integument so as to be almost hidden externally. Plate XXIV, fig. 507."

On page 334, the reference to Plate XXIV, fig. 507 (which has not been altered) reads "*Chiton amiculatus*. *Amicula* Gray."

Gray, in his article on the Genera of the Family Chitonidae (Proc. Zool. Soc. London, 1846, p. 66), defines *Amicula* thus: "Exposed part of valves small, subcordate, as broad as long; mantle bristly." On page 69, to "*Amicula* Gray, Syn. 1840" he adds "*Amicula vestita*. *Chiton vestitus* Sby., Zool. Journ. IV, p. 368, 1829."

In 1847 (Proc. Zool. Soc. London, 1847, p. 169), Gray again links *C. vestitus* with *Amicula* as the sole cited example.

In H. & A. Adams' Genera of Recent Mollusca, 1854, *C. amiculatus* Pallas, *emersonii* Conthony, *pallasii* Middendorff, and *vestitus* Sowerby are the species ranked under *Amicula* Gray.

In short, there is no question but that Gray's genus was intended to cover species with apically exposed valves, and the illustration of it by an inaccurate figure can hardly be taken as sufficient to overthrow the obvious intention, however we may be addicted to extreme technicalities.

In conclusion one may smile at the identification as a "strictly binomial writer" of one who names a new species *Chiton Phae-nochiton Dichachiton Symmetrogephyrus pallasii*. The early confusion between *C. amiculatus* and *C. stelleri* was not remarkable when we consider that the former was known only by the work of Pallas, while the latter was not rare, and few authors consulted Pallas's work but were content to copy the figures and blunders of earlier writers.

## BORUS LORENTZIANUS DOERING

BY T. D. A. COCKERELL

In the Santa Barbara hills, in the Province of Jujuy, Argentina, we found the tropical biota present in a dilute form, but still with magnificent trees and quantities of green parrots, talking a language we did not understand. We were much disappointed not to see any monkeys. In all the forested country near our camp at Sunchal, *Borus* shells were scattered about in considerable abundance. Here and there we saw *Epiphragmophora tucumanensis* Döring and two species of *Bulimulus*.

It was winter in that country, and much of the time we were in a cold mist, condensing on the tree above our tent and producing a monotonous drip, drip, drip, all night. Not a single *Borus* was seen alive, but some of the shells were fresh enough to show all the essential characters. At the museum in Buenos Aires, I had ascertained that this *Borus* was *B. lorentzianus* Döring, of which Pilsbry states in the Manual of Conchology, Vol. 10, 1895, that he could obtain neither specimens nor description. Subsequently in Vol. 14, 1901, p. 125, he gave a translation of Döring's description from *Periodico Zoologico*, II, 1877, 255. No figure appeared until 1924, when illustrations were published by Joaquin Frenguelli in an article on *Borus* shells in kitchen-middens of the Rio San Roque indigenes.<sup>1</sup> These illustrations of the weathered and corroded shells of the mounds show the shape but not the characteristic sculpture, and are thus inadequate for conchological requirements. I saw specimens from as far south as Tucuman. In the Buenos Aires Museum, the shells are labeled *B. oblongus* var. *lorentzianus*, but on comparison with veritable *B. oblongus* (Müller) from Trinidad (*F. W. Rohwer*), they appear to represent a distinct species, which may be diagnosed as follows:

<sup>1</sup>Frenguelli's article appeared in *Boletin Acad. Nacional de Ciencias en Córdoba* (Rep. Argentina), XXVI, pp. 404, 418; *Borus* "*oblongus* var. *lorentzianus*" on pp. 409-416, figs. 3, 4, 8, 9. I owe the reference to this article to Dr. Pilsbry.